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=> b hcap
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FILE COVERS 1907 - 21 Aug 2006  VOL 145 ISS 9
FILE LAST UPDATED: 20 Aug 2006  (20060820/ED)

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 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> d all hitstr l24 tot

L24  ANSWER 1 OF 3  HCAPLUS  COPYRIGHT 2006 ACS on STN
AN   2004:289219  HCAPLUS
DN   140:273048
ED   Entered STN:  08 Apr 2004
TI   Procedure for the conversion of polysulfane in hydrogen sulfide and sulfur
     in gas flows resulting in hydrogen sulfide synthesis
IN   Moeller, Alexander; Boeck, Wolfgang; Taugner, Wolfgang
     ; Heinzel, Harald; Rautenberg, Stephan
PA   Degussa A.-G., Germany
SO   Ger. Offen., 2 pp.
     CODEN: GWXXBX
DT   Patent
LA   German
IC   ICM  B01D-0053/48
     ICS  B01D-0053/86
CC   49-2 (Industrial Inorganic Chemicals)
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.         DATE
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PI   DE--10245164         A1    20040408    2002DE-1045164          20020926 <--
     WO2004028963         A1    20040408    2003WO-EP09432          20030826 <--
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
             PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
             TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
             FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     AU2003255483         A1    20040419    2003AU-0255483          20030826 <--
     EP---1542925         A1    20050622    2003EP-0798130          20030826 <--
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
     BR2003014663         A     20050802    2003BR-0014663          20030826 <--
     CN---1684905         A     20051019    2003CN-0823024          20030826 <--
     JP2006500309         T2    20060105    2004JP-0538838          20030826 <--
     US2005265913         A1    20051201    2005US-0529148          20050324 <--
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PRAI 2002DE-1045164 A 20020926 <--
2003WO-EP09432 W 20030826

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---|---|---|
| DE 10245164 | ICM | B01D-0053/48 |
| | ICS | B01D-0053/86 |
| | IPCI | B01D0053-48 [ICM,7]; B01D0053-86 [ICS,7] |
| | IPCR | C01B0017-00 [I,C*]; C01B0017-16 [I,A] |
| | ECLA | C01B017/16M; C01B017/16P |
| WO2004028963 | IPCI | C01B0017-16 [ICM,7]; C01B0017-00 [ICM,7,C*] |
| | IPCR | C01B0017-00 [I,C*]; C01B0017-16 [I,A] |
| | ECLA | C01B017/16M; C01B017/16P |
| AU2003255483 | IPCI | C01B0017-16 [ICM,7]; C01B0017-00 [ICM,7,C*] |
| | IPCR | C01B0017-00 [I,C*]; C01B0017-16 [I,A] |
| EP---1542925 | IPCI | C01B0017-16 [ICM,7]; C01B0017-00 [ICM,7,C*] |
| | IPCR | C01B0017-00 [I,C*]; C01B0017-16 [I,A] |
| | ECLA | C01B017/16M; C01B017/16P |
| BR2003014663 | IPCI | C01B0017-16 [ICM,7]; C01B0017-00 [ICM,7,C*] |
| | IPCR | C01B0017-00 [I,C*]; C01B0017-16 [I,A] |
| | ECLA | C01B017/16M; C01B017/16P |
| CN---1684905 | IPCI | C01B0017-16 [ICM,7]; C01B0017-00 [ICM,7,C*] |
| | IPCR | C01B0017-00 [I,C*]; C01B0017-16 [I,A] |
| JP2006500309 | IPCI | C01B0017-16 [I,A]; C01B0017-00 [I,C*] |
| US2005265913 | IPCI | C01B0017-20 [ICM,7]; C01B0017-00 [ICM,7,C*] |
| | NCL | 423/242.200 |
| | ECLA | C01B017/16M; C01B017/16P |

AB Polysulfane (H2Sx) resulting in hydrogen sulfide synthesis are catalytically converted by contacting with e.g. activated carbon, Al2O3, SiO2, or zeolithes to give H2S and S.

ST polysulfane catalytic conversion; hydrogen sulfide manuf; sulfur manuf

IT Zeolites (synthetic), processes
RL: CAT (Catalyst use); CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(for conversion of polysulfane in hydrogen sulfide and sulfur in gas flows resulting in hydrogen sulfide synthesis)

IT 7440-44-0, Carbon, processes
RL: CAT (Catalyst use); CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(activated; for conversion of polysulfane in hydrogen sulfide and sulfur in gas flows resulting in hydrogen sulfide synthesis)

IT 1344-28-1, Alumina, processes 7631-86-9, Silica, processes
RL: CAT (Catalyst use); CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(for conversion of polysulfane in hydrogen sulfide and sulfur in gas flows resulting in hydrogen sulfide synthesis)

IT 7704-34-9P, Sulfur, preparation **7783-06-4P, Hydrogen sulfide**, preparation
RL: **IMF (Industrial manufacture)**; **SPN (Synthetic preparation)**; **PREP (Preparation)**
(procedure for conversion of polysulfane in **hydrogen sulfide** and sulfur in gas flows resulting in **hydrogen sulfide** synthesis)

IT **37331-50-3, Sulfane**
RL: RCT (Reactant); RACT (Reactant or reagent)
(procedure for conversion of polysulfane in hydrogen sulfide and sulfur in gas flows resulting in hydrogen sulfide synthesis)

IT **7783-06-4P, Hydrogen sulfide**, preparation
RL: **IMF (Industrial manufacture)**; **SPN (Synthetic preparation)**; **PREP (Preparation)**
(procedure for conversion of polysulfane in **hydrogen sulfide** and sulfur in gas flows resulting in **hydrogen sulfide** synthesis)

RN 7783-06-4 HCAPLUS

CN Hydrogen sulfide (H2S) (8CI, 9CI) (CA INDEX NAME)

$H_2S$

IT **37331-50-3, Sulfane**
RL: RCT (Reactant); RACT (Reactant or reagent)
(procedure for conversion of polysulfane in hydrogen sulfide and sulfur in gas flows resulting in hydrogen sulfide synthesis)
RN 37331-50-3 HCAPLUS
CN Sulfane (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L24 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2006 ACS on STN
AN **1986:409243** HCAPLUS
DN 105:9243
ED Entered STN: 13 Jul 1986
TI Removing **sulfane** from biogas
IN Buryan, Petr; Zacher, Jan; Palaty, Jiri; Jonas, Jaroslav
PA Czech.
SO Czech., 2 pp.
CODEN: CZXXA9
DT Patent
LA Czech
IC C10K-0001/14
CC 52-1 (Electrochemical, Radiational, and Thermal Energy Technology)
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI CS----221457 | B | 19830429 | 1981CS-0001999 | 19810318 |
| PRAI 1981CS-0001999 | | 19810318 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---|---|---|
| CS 221457 | IC | C10K-0001/14 |
| | IPCI | C10K0001-14; C10K0001-00 [C*] |
| | IPCR | C10K0001-00 [I,C*]; C10K0001-14 [I,A] |

AB The content of **sulfanes** in biogas is decreased to 1% after scrubbing with aqueous FeL- (H4L = EDTA) at 20-50°. The reduced form of the agent FeL2- is reactivated by air oxidation
ST hydrogen sulfide removal biogas; iron EDTA hydrogen sulfide removal
IT Fuel gas manufacturing
(biogas, hydrogen sulfide removal in, iron EDTA salt for)
IT 74-82-8P, preparation
RL: **PREP (Preparation)**
(manufacture of gas containing, **hydrogen sulfide** removal in, iron EDTA salt for)
IT 15275-07-7
RL: USES (Uses)
(removal of hydrogen sulfide, from biogas)
IT 7783-06-4, uses and miscellaneous
RL: REM (Removal or disposal); PROC (Process)
(removal of, from biogas, iron EDTA salt in)

L24 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2006 ACS on STN
AN **1969:456115** HCAPLUS
DN 71:56115
ED Entered STN: 12 May 1984
TI **Sulfanes**
AU Burton, K. W. C.; Machmer, Paul
CS Univ. Cologne, Cologne, Fed. Rep. Ger.
SO Inorg. Sulphur Chem. (1968), 335-66. Editor(s): Nickless, G. Publisher: Elsevier Publ. Co., Amsterdam, Neth.
CODEN: 21AEAH
DT Conference; General Review
LA English

CC 78 (Inorganic Chemicals and Reactions)
AB **Sulfanes** are reviewed in terms of H2S, preparation and phys. properties of **sulfanes**, thermal chemistry of polysulfanes, Raman and uv spectra of **sulfanes**, mol. distribution function of the **sulfane**-halosulfane condensation reaction, chemistry of **sulfanes** including reactions with chloral and Cl3CSCl, and asym. derivs. of the type RSnH and RSmCl, thioalkanes, acidity of the **sulfanes**, and anal. determination of **sulfanes** and **sulfane**-S mixts. 150 references.
ST **sulfanes** review; review **sulfanes**; anal **sulfanes** review; spectra **sulfanes** review
IT 50864-71-6P, **Hydrogen sulfide** (H2Sx)
RL: **SPN (Synthetic preparation)**; **PREP (Preparation)**

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(FILE 'HOME' ENTERED AT 15:06:04 ON 21 AUG 2006)

FILE 'HCAPLUS' ENTERED AT 15:06:51 ON 21 AUG 2006
L1 1 US2005265913/PN OR (US2005-529148 OR DE2002-10245164)/AP,PRN
E MOLLER A/AU
L2 81 E3-15
L3 3 E24
E MOELLER A/AU
L4 121 E3-11,E24-25
E BOCK W/AU
L5 181 E3-7,E30-31
E TAIGNER W/AU
E TAUGNER W/AU
L6 4 E4
E HEINZEL H/AU
L7 13 E3,E5
E RAUTENBERG S/AU
L8 7 E4-5

FILE 'REGISTRY' ENTERED AT 15:12:36 ON 21 AUG 2006

FILE 'HCAPLUS' ENTERED AT 15:12:36 ON 21 AUG 2006
L9 TRA L1 1- RN : 6 TERMS

FILE 'REGISTRY' ENTERED AT 15:12:36 ON 21 AUG 2006
L10 6 SEA L9
L11 136 SULFANE
L12 1230 H2S

FILE 'HCAPLUS' ENTERED AT 15:16:58 ON 21 AUG 2006
L13 52463 L12
L14 108157 ?HYDROGEN (1A)(SULFID? OR SULPHID?) OR (HYDROSULFUR? OR HYDROSU
E HYDROGEN SULFIDE/CT
E E3+ALL
L15 50816 E4
L16 7703 L13-15 (L) PREP+NT/RL
L17 5 L16 AND L1-8
L18 9019 L11
L19 511 SULFANE OR SULPHANE
E POLYSUFANE/CT
E POLYSULFANE/CT
L20 1 L17 AND L18-19
L21 13 L16 AND L19
L22 12 L21 NOT L20
SEL AN 7 11
L23 2 E1-4 AND L22
L24 3 L20,L23
L25 133 POLYSULFAN? OR POLYSULPHAN?
L26 5 L25 AND L16

| | | |
|---|---|---|
| L27 | 1 | L26 AND L1-8 |
| L28 | 4 | L26 NOT L27 |
| L29 | 2 | L28 NOT L22 |

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=> b wpix
FILE 'WPIX' ENTERED AT 09:37:56 ON 22 AUG 2006
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FILE LAST UPDATED:          17 AUG 2006      <20060817/UP>
MOST RECENT DERWENT UPDATE:     200653        <200653/DW>
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http://scientific.thomson.com/media/scpdf/ipcrdwpi.pdf <<<

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http://www.stn-international.de/stndatabases/details/dwpi_r.html <<<
'BIX' IS DEFAULT SEARCH FIELD FOR 'WPIX' FILE

=> d all abex tech l30 tot

L30  ANSWER 1 OF 4  WPIX  COPYRIGHT 2006 THE THOMSON CORP on STN
AN   2004-317818 [30]   WPIX
DNC  C2004-120857
TI   Purification of crude gas stream from hydrogen sulfide
     synthesis comprises catalytic conversion of polysulfanes into
     hydrogen sulfide and sulfur.
DC   E36 J01 J04
IN   BOCK, W; HEINZEL, H; MOLLER, A;
     RAUTENBERG, S; TAUGNER, W; BOECK, W; MOELLER, A
PA   (DEGS) DEGUSSA AG; (BOCK-I) BOCK W; (HEIN-I) HEINZEL H; (MOLL-I) MOLLER A;
     (RAUT-I) RAUTENBERG S; (TAUG-I) TAUGNER W
CYC  106
PI   DE----10245164 A1 20040408 (200430)*       2    B01D-053-48
     WO--2004028963 A1 20040408 (200430)  EN         C01B-017-16
        RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS
            LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
         W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
            DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
            KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH
            PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC
            VN YU ZA ZM ZW
     AU--2003255483 A1 20040419 (200462)             C01B-017-16
     EP-----1542925 A1 20050622 (200541)  EN         C01B-017-16
         R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV
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     BR---200314663 A  20050802 (200553)             C01B-017-16
     US--2005265913 A1 20051201 (200579)             C01B-017-20     <--
     JP--2006500309 W  20060105 (200603)         8   C01B-017-00
     CN-----1684905 A  20051019 (200612)             C01B-017-16
ADT  DE----10245164 A1 2002DE-1045164 20020926; WO--2004028963 A1
     2003WO-EP09432 20030826; AU--2003255483 A1 2003AU-0255483 20030826;
     EP-----1542925 A1 2003EP-0798130 20030826, 2003WO-EP09432 20030826;
     BR---200314663 A 2003BR-0014663 20030826, 2003WO-EP09432 20030826;
     US--2005265913 A1 2003WO-EP09432 20030826, 2005US-0529148 20050324
     ; JP--2006500309 W 2003WO-EP09432 20030826, 2004JP-0538838 20030826;
     CN-----1684905 A 2003CN-0823024 20030826
FDT  AU--2003255483 A1 Based on WO--2004028963; EP-----1542925 A1 Based on
     WO--2004028963; BR---200314663 A Based on WO--2004028963; JP--2006500309 W
     Based on WO--2004028963
PRAI 2002DE-1045164      20020926
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IC ICM B01D-053-48; C01B-017-00; C01B-017-16; C01B-017-20
ICS B01D-053-86
AB DE 10245164 A UPAB: 20040511
NOVELTY - Process for converting **polysulfanes** into **hydrogen sulfide** (**H2S**) and sulfur (S).comprises catalytic conversion of **polysulfanes** (**H2Sx**) in crude gas streams containing **H2S**, obtained in **H2S** synthesis.
USE - The process is used for purifying crude gas streams obtained in **hydrogen sulfide** synthesis.
ADVANTAGE - Crude gas obtained in synthesis of **hydrogen sulfide** (**H2S**) from hydrogen and sulfur (S) usually contains **polysulfanes** (**H2Sx**), in amounts over 400 vpm, as by-products. Compressing the gas tends to cause uncontrolled decomposition into **H2S** and S and hence undesirable deposition of S in the entire compression zone, including the peripheral pipes and valves. The present process results in controlled conversion of **polysulfanes** and prevents deposition of S in the pipework.
Dwg.0/0
FS CPI
FA AB; DCN
MC CPI: E10-B03; E11-Q02; E31-D04; **E31-F02**; E31-N04C; E31-N04D; E31-P02B; E31-P03; E32-A02; E33-A03; E33-A04; J01-E03F; J04-E01; N01-A; N01-B; N01-C02; N01-D02; N02; N03; N04-A; N05-D; N06-A; N06-B; N07-L02B
ABEX UPTX: 20040511
EXAMPLE - Crude **hydrogen sulfide** (**H2S**) gas (up to 5000 Nm3/hour), generated from hydrogen (H2) and sulfur (S), was passed at 1.05-1.5 bar absolute into a jet scrubber system for converting the **polysulfanes** into **H2S** and S. The scrubbing liquid was an aqueous or methanolic 0.5-10% solution of potassium and/or sodium hydroxide/**hydrogen sulfide** (KOH/KHS, NaOH/NaHS). The resultant S remained in solution as the corresponding polysulfide. Any precipitated solid S could be removed by filtration. Fresh solution was used to replace losses by evaporation and the fraction of circulating solution discharged, according to the S content. More **sulfane** was decomposed in a countercurrent scrubber and droplets were separated in a demister. If necessary, residual **sulfanes** were decomposed in an adsorber bed (activated charcoal, zeolite etc.) and the S formed was deposited. Online UV analysis was used to determine the **sulfane** concentration in the crude and purified gas. The process prevented undesired S deposits in the plant.
TECH UPTX: 20040511
TECHNOLOGY FOCUS - CHEMICAL ENGINEERING - Preferred Process: The crude gas containing **H2S** is contacted with (a) a suitable catalytic solid; (b) a basic aqueous or alcoholic solution containing catalytically active compounds; or (c) a gas containing catalytically active compounds. Conversion may be carried out in several stages.

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Catalysts: (disclosed) Suitable catalysts are (a) activated charcoal, alumina, silica in various forms, including naturally-occurring minerals, zeolites, glasses, (mixed) oxides, alkali(ne earth) and other basic (hydr)oxide(s); (b) solutions of ammonia, amines, aminoalcohols and alkali(ne earth) or other basic (hydr)oxides or (**hydrogen**) **sulfides**; (c) gaseous ammonia, amines or aminoalcohols.

L30 ANSWER 2 OF 4 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
AN **2004-259406** [25] WPIX
DNC C2004-101338
TI Purification of **hydrogen sulphide** synthesised form hydrogen and liquid sulfur by passage through a porous filter compound.
DC E36 J01
IN LE BEC, R; LE BEC, R O M
PA (AQOR) ATOFINA; (ARKE-N) ARKEMA; (ARKE-N) ARKEMA INC; (AQOR) ARKEMA; (AQOR) ATOFINA SA

CYC 106
PI FR-----2844208 A1 20040312 (200425)* 9 B01D-046-00
WO--2004022482 A2 20040318 (200425) FR C01B-017-16
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR HU IE IT KE LS
LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK
DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH
PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC
VN YU ZA ZM ZW
AU--2003278253 A1 20040329 (200459) C01B-017-16
EP-----1542924 A2 20050622 (200541) FR C01B-017-16
R: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV
MC MK NL PT RO SE SI SK TR
EP-----1542924 B1 20060201 (200612) FR C01B-017-00
R: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT
RO SE SI SK TR
DE----60303453 E 20060413 (200629) C01B-017-00
ES-----2257696 T3 20060801 (200652) C01B-017-16
ADT FR-----2844208 A1 2002FR-0011156 20020906; WO--2004022482 A2
2003WO-FR002638 20030903; AU--2003278253 A1 2003AU-0278253 20030903;
EP-----1542924 A2 2003EP-0769563 20030903, 2003WO-FR02638 20030903;
EP-----1542924 B1 2003EP-0769563 20030903, 2003WO-FR02638 20030903;
DE----60303453 E 2003DE-0603453 20030903, 2003EP-0769563 20030903,
2003WO-FR02638 20030903; ES-----2257696 T3 2003EP-0769563 20030903
FDT AU--2003278253 A1 Based on WO--2004022482; EP-----1542924 A2 Based on
WO--2004022482; EP-----1542924 B1 Based on WO--2004022482; DE----60303453
E Based on EP-----1542924, Based on WO--2004022482; ES-----2257696 T3
Based on EP-----1542924
PRAI 2002FR-0011156 20020906
IC ICM B01D-046-00; C01B-017-00; C01B-017-16
ICS B01J-020-08; B01J-020-10; B01J-020-20
AB FR 2844208 A UPAB: 20040418
NOVELTY - Purification of a gas comprising mainly **hydrogen sulfide** obtained by reaction of hydrogen with liquid sulfur in an industrial unit, by passing the gas through a filter containing porous particles of active carbon, alumina or silica.
USE - The process of the invention resolves the problem of formation and decomposition of **sulfanes**, H2Sx, where x is 2 or more.
ADVANTAGE - The advantage of using porous materials is that they become saturated with sulfur and/or sulfur compounds in the interior of their pores, thus avoiding blockage in the spaces between the particles. Active carbon is capable of retaining up to 70% of its initial weight in sulfurised compounds .After use, the used carbon can be incinerated and converted entirely to CO, SO2 and H2O.
Dwg.0/0
FS CPI
FA AB; DCN
MC CPI: E11-Q01; **E31-F02**; E31-N04C; E31-P03; E34-C02; J01-G03
ABEX UPTX: 20040418
EXAMPLE - A filter containing active carbon was submitted to a current of gas, of purity 99.7% in **H2S**, for a determined time. The filter was then isolated from the gas current and purged with N2 at 20 - 100 degrees C to eliminate **H2S** The direction of traverse of the filter defined an entry and exit, and samples of active carbon were taken at regularly spaced intervals between entry and exit for analysis .Total sulfur was determined by microanalysis ; the sample was submitted to total combustion in the presence of O2, the S compounds being converted to SO2 then H2SO4 by oxidation with H2O2 and estimation by coulometry. A synthesis gas , at 4 bars pressure, containing mainly **H2S** from a S/H2 reaction was passed through a condenser cooling to 30 degrees C at 0.5 tonne/hour (75 cm3/hour).The gas was then passed through a cylindrical filter containing 8 kg of active carbon, ACTICARBONE AC35 . The active carbon was present as cylinders of 4 mm diameter and surface area at least 1000 m2.g. After 8 hours of filtration, the filter was removed and analysed ; samples were taken at spacings of 10 cm along the length of the

filter from 0(entry), 10, 20, 30, 40 and 50(exit).The results, in this order, as total S in g/100 g of initial active carbon were :- 0(34), 10(24), 20(1), 30(1), 40(1) and 50(1).

TECH UPTX: 20040418

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Process Details : The industrial process is carried out at 400 - 450 degrees C in a reactor over mounted with a reflux column ; the gas leaving the head of the column is cooled in one or more condensers where sulfur is recovered. The gas leaving the condensers, at 30 degrees C, may contain impurities leading to a post reaction in which **sulfanes**, H2Sx, as well as sulfur, can cause blockages and product breakdowns. The porous filter compound is preferably active carbon ; the filter may also contain a material for selective adsorption of water such as a molecular sieve of type 3 Angstrom.

L30 ANSWER 3 OF 4 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
AN **1990-369027** [50] WPIX
DNC C1990-160546
TI Water treatment agent - comprises sulphide- and sulphate-ions and sulphur, etc., for heavy- and transition-metal removal.
DC D15 E37 M25
IN STRATEN, G
PA (STRA-I) STRATEN G
CYC 18
PI DE-----3917412 C 19901213 (199050)*
WO-----9200917 A 19920123 (199207)#
RW: AT BE CH DE DK ES FR GB IT LU NL SE
W: CA DK FI NO SU US
EP------537143 A1 19930421 (199316)# GE 46 C02F-001-52
R: AT BE CH DE DK ES FR GB IT LI LU NL SE
US-----5451327 A 19950919 (199543)# 11 C02F-001-62
EP------537143 B1 19970917 (199742)# GE 13 C02F-001-52
R: AT BE CH DE DK ES FR GB IT LI LU NL SE
DE----59010762 G 19971023 (199748)# C02F-001-52
ADT DE-----3917412 C 1989DE-3917412 19890529; EP------537143 A1 1990EP-0910100 19900704, 1990WO-DE00499 19900704; US-----5451327 A 1990WO-DE00499 19900704, 1993US-0972479 19930318; EP------537143 B1 1990EP-0910100 19900704, 1990WO-DE00499 19900704; DE----59010762 G 1990DE-0510762 19900704, 1990EP-0910100 19900704, 1990WO-DE00499 19900704
FDT EP------537143 A1 Based on WO-----9200917; US-----5451327 A Based on WO-----9200917; EP------537143 B1 Based on WO-----9200917; DE----59010762 G Based on EP------537143, Based on WO-----9200917
PRAI 1989DE-3917412 19890529; 1990EP-0910100 19900704; 1993US-0972479 19930318; 1990DE-0510762 19900704
REP 1.Jnl.Ref; BE----447850; DD----154008; EP----349671; US---1934626
IC ICM C02F-001-52; C02F-001-62
ICS C01B-017-22; C02F-001-58
AB DE 3917412 C UPAB: 19930928
Water treatment agent (I) comprises (A) 17-21% S22- ions; (B) 4-8% S32- ions; (C) 15-21% S42- ions; (D) 3-7% S52- ions; (E) 12-18% S62- ions; (F) 10-14% S82- ions; (G) 11-16% S2O32- ions; (H) 6-10% S4O32- ions; (I) 1-5% S4O62- ions, and (J) 0-3% S6 and ring sulphur.
USE/ADVANTAGE - For the removal of heavy or transition metals from water. Unlike conventional metal hydroxide treatment solns., (I) can be used over a wide pH range and produces heavy metal ppts. that are easily removed. (I) can especially be used with spent corrosion inhibitors or waste streams from metal alloy mfr.
0/3
FS CPI
FA AB; DCN
MC CPI: D04-A01B; D04-B05; E31-F04; E31-F05; M25-E01

L30 ANSWER 4 OF 4 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
AN 1989-301845 [42] WPIX
DNC C1989-133437
TI Sealing of gas-separation membranes, especially hollow fibres - by surface treatment

with pref. di-or tri-functional monomers inter-reacting to form polymers.
DC A28 A88 E36 J01 P42
IN EKINER, O M; HAYES, R A; MANOS, P; EKINER, O; EKINER, C M
PA (AIRL) AIR LIQUIDE SA; (DUPO) DU PONT DE NEMOURS & CO E I; (CAAL) AIR LIQUIDE CANADA LTEE
CYC 23
PI EP------336999 A 19891018 (198942)* EN 19
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
JP----01262922 A 19891019 (198948)
NO-----8802144 A 19891106 (198950)
PT-------87511 A 19891110 (198950)
DK-----8802692 A 19891014 (198951)
BR-----8802375 A 19891205 (199003)
ZA-----8803525 A 19900131 (199009)
AU-----8816330 A 19900412 (199023)
CN-----1036908 A 19891108 (199033)
US-----5091216 A 19920225 (199211) 11
JP----93077446 B 19931026 (199345) 15 B01D-071-82
CA-----1329898 C 19940531 (199427) B01D-069-00
EP------336999 B1 19950906 (199540) EN 21 B01D-071-06
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
DE-----3854426 G 19951012 (199546) B01D-071-06
ADT EP------336999 A 1988EP-0107943 19880518; JP----01262922 A 1988JP-0119439 19880518; ZA-----8803525 A 1988ZA-0003525 19880518; US-----5091216 A 1990US-0622269 19901205; JP----93077446 B 1988JP-0119439 19880518; CA-----1329898 C 1988CA-0567000 19880517; EP------336999 B1 1988EP-0107943 19880518; DE-----3854426 G 1988DE-3854426 19880518, 1988EP-0107943 19880518
FDT JP----93077446 B Based on JP----01262922; DE-----3854426 G Based on EP------336999
PRAI 1988US-0175499 19880413
REP 2.Jnl.Ref; A3...9135; FR---2391752; JP--59059220; JP--59059222; No-SR.Pub; WO---8810140; JP---5959220; JP---5959222
IC B01D-013-04; B01D-053-22; B05D-005-00; C08J-005-22; C08J-007-16
ICM B01D-069-00; B01D-071-06; B01D-071-82
ICS B01D-013-04; B01D-053-22; B05D-005-00; C08J-005-22; C08J-007-16; D06M-013-152; D06M-013-165; D06M-013-192; D06M-013-332; D06M-013-395
AB EP 336999 A UPAB: 19930923
Sealing of a gas-separation membrane is effected by applying to the surface at least two monomers which can react to form a polymer and thus improve the membrane selectivity. The monomer combinations are pref. of di- or tri-functional monomers and pref. comprise (A) an acylchloride or an isocyanate or a glycidyl ether and (B) an amine.
USE/ADVANTAGE - The method is pref. used with aromatic polyamide or aromatic **polysulphane** membranes which are in hollow fibre form (claimed) e.g. of the type described in US4230463. The polymer formed by (A) and (B) serves to seal defects or imperfections arising during membrane formation or during subsequent membrane handling. Among the membranes thus treated are those used in H2 recovery from refinery or ammonia plant; separation of CO or H2S from hydrocarbons; or enrichment of O2 and N2 from air.
0/0
FS CPI GMPI
FA AB; DCN
MC CPI: A11-B05C; A12-S05A; A12-W11A; E10-J02D; E11-Q01; E31-A02; E31-D01; **E31-F02**; E31-H04; E31-N05B; J01-C03; J01-E03E

=> => d his

(FILE 'HOME' ENTERED AT 09:17:07 ON 22 AUG 2006)

FILE 'REGISTRY' ENTERED AT 09:17:40 ON 22 AUG 2006
L1 1 HYDROGEN SULFIDE/CN

FILE 'WPIX' ENTERED AT 09:18:14 ON 22 AUG 2006

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L2            1 US2005265913/PN OR (US2005-529148 OR DE2002-10245164)/AP,PRN
                E MOLLER A/AU
L3           86 E3-7
                E MOELLER A/AU
L4           95 E3-6
                E BOCK W/AU
L5           92 E3-4
                E TAUGNER W/AU
L6            4 E3
                E HEINZEL H/AU
L7           11 E3
                E RAUTENBERG S/AU
L8            8 E3
                E HYDROGEN SULFIDE/CN
L9            2 E3-4
L10        7244 (129436-0-0-0 OR 357-0-0-0)/DCRE OR (R01785 OR RA01M1)/DCN OR 1
L11        1526 L9/DCR
L12       18915 (DIHYDROGEN OR HYDROGEN)(1A)(?SULPHID? OR ?SULFID?) OR STINK DA
L13       20295 L10-12
L14         158 POLYSULFANE? OR POLYSULPHANE? OR SULFANE? OR SULPHANE?
L15          12 L13 AND L14
L16           1 L15 AND L2-8
L17          11 L15 NOT L16
L18        1688 E31-F02/MC
L19           3 L18 AND L14
L20           1 L19 AND L2-8
L21           3 L16,L19
L22          10 H2SX
L23           2 L22 AND L14
L24           1 L23 AND L2-8
L25           1 L23 NOT L24
L26           2 L19 NOT L20
L27          12 L17,L24,L26
L28           3 L21,L24
                SEL AN 2 3 6 L27
L29           3 E1-3 AND L27
L30           4 L28-29

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